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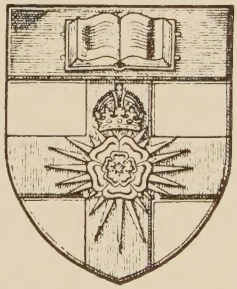

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GENERAL INDEX

MONTHLY NOTICES

LIII—LXX

1892—1910

TOGETHER WITH

GENERAL INDEX TO ILLUSTRATIONS

MEMOIRS I—LIX

MONTHLY NOTICES I—LXX

1822—1910

BIBL. LONDIN

PRINTED BY
NEILL AND COMPANY, LIMITED,
EDINBURGH.

GENERAL INDEX

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OF THE

ROYAL ASTRONOMICAL SOCIETY

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APPENDIX, LIST OF COMETS

1892—1910

LONDON
ROYAL ASTRONOMICAL SOCIETY
BURLINGTON HOUSE, W.
1911

BIBL. LONDIN. UNIV.

PREFACE

The General Index to the *Monthly Notices*, Volumes XXX. to LII., was published in 1896. The increase in size of recent volumes of the *Monthly Notices*, and the convenience of making an index cover an easily remembered group of volumes, suggested that the publication of Volume LXX. should be followed as soon as possible by the preparation of a General Index to Volumes LIII. to LXX., with the hope that future indexes might cover even periods of twenty years. Following the pre cedent set on the last occasion, the Council decided that the new Index should deal only with those volumes not included in former indexes ; and that no attempt should be made to prepare a complete index to the whole series of seventy volumes. An ample number of the preceding indexes remain in stock.

The preparation of plans for the new Index was entrusted to the Library Committee, who completed their task in 1910 June. They found that the work would be much simplified by the fact that Mr. Wesley had, for all but two of the volumes, prepared the annual index to each volume in the form of a card catalogue, and that these cards would form the basis of the new General Index. It was evident, however, that the verification of all the entries, and the necessary re-arrangement of the subject-headings, was a larger task than could be performed by the permanent staff of the Society without considerable delay, which the Committee were anxious to avoid. They therefore asked and obtained the authority of the Council to engage expert assistance ; and they were fortunate in securing the services of Mr. F. W. Levander, who, under the general direction of the Secretaries, has carried out the work with great care and accuracy.

The Library Committee recommended that the new Index should follow as closely as possible on the lines drawn by Mr. Wesley in the preparation of the last. The considerable changes that have taken place in the subject-matter of papers appearing in the *Monthly Notices* have, however, rendered inevitable some rearrangement of the subject-headings. A brief examination of these changes will be of interest, as showing the trend of recent work by Fellows and Associates of the Society.

The subject-heading **Celestial Mechanics** does not occur in the former index, the papers which might have been indexed under that head being placed under **Planetary Theory** or **Perturbations**. The present Index contains a number of papers of a very general character, such as "On the general solution of Laplace's Equation," or "On the Verification of the Newtonian Law," which may be grouped with convenience under the general heading **Celestial Mechanics**. Papers which might have been included under the heading Theoria Motus have been placed under **Orbits,** together with the group of papers dealing with Periodic Orbits. But papers relating to the Theory and Tables of particular planets have been indexed under the names of those planets, *e.g.* **Saturn, Theory and Tables of.**

The great number of papers on Celestial Photography have presented some difficulties. Many which have been placed in the annual indexes under **Astrographic Chart** are so closely related to others which do not refer to that undertaking by name that it has seemed best to include them all under the heading Photography, divided into four sections.

Photography, Celestial, contains miscellaneous papers of a general character.

Photography, Instruments, Adjustments, and Errors, includes the papers on instrumental details and accessories, formation of star discs, and the like.

Photography, Measures and Reductions, includes the large number of papers on the theory of measurement and reduction of photographic plates, the accuracy of the measures, and tables for facilitating the reductions.

Photography, Magnitudes and Statistics, includes Photographic Photometry and Star Counts. The two subjects are so intimately related in the group of papers to be indexed that it seemed inadvisable to separate those ostensibly statistical from those in which the photometric methods formed the principal subject.

As before, papers relating to the photographing of particular objects have been indexed under those objects, and not under the general heading **Photography**.

The large number of papers on Instrumental Errors, Personal Errors of Observation, etc., ranged over such a variety of topics that their indexing presented some difficulty, especially since many of them included theoretical discussions of the application of least squares to particular problems. The more instrumental papers have been indexed under the heading **Errors of Instruments and of Observation** ; the purely theoretical under **Errors, Theory of.** The subject-heading **Least Squares** is referred to the latter. And it has been found desirable to repeat some of the instrumental papers under the heading **Transit Circle.**

The subjects Figure of the Earth, Geodesy, Gravity, Pendulum, Precession, and Variation of Latitude are so closely connected that some overlapping is inevitable. The theoretical papers have been indexed under **Earth, Figures of the**; the observational geodesy under **Geodesy**. **Gravity** includes papers on the nature of gravity, with a cross reference to Geodesy. **Latitude, Variation of,** includes the observational papers on that subject, and repeats some already indexed under Figure of the Earth. **Precession** includes only determinations of the constant.

Recent developments in the theory of Stellar Statistics, Systematic Motions, and Star Drift have much increased the difficulty of indexing. The papers on star counts and on theoretical statistics have been brought together under **Stars, Distribution and Statistics of.** Determinations of Proper Motion in general are included under **Stars, Proper Motions of**; and only those which deal more particularly with recent developments are found under **Stars, Motion in Space and the two-drift theory.**

In other respects the arrangement of subject entries follows as closely as possible the rules adopted in the General Index to Volumes XXX. to LII., which are described in the preface to that index, and need not be repeated here.

The growing practice of multiple authorship has made it necessary to reconsider the method of indexing author entries. In the former index a joint paper was indexed as follows :

> Crossley, Edward, and Joseph Gledhill.
> Gledhill, Joseph, and Edward Crossley.

The Royal Society Catalogue of Scientific Papers follows this plan, except in the Supplementary Volume.

Other indexes and catalogues follow a different plan : under the name of the second author they give a cross reference to the first, *e.g.*—

> Gledhill, Joseph : see Crossley and Gledhill.

Others again do not catalogue the second name in its alphabetical place at all.

Since the policy of the General Index was to avoid cross references as far as possible, it was felt that to refer the name of the second author to the first was undesirable. At the same time the plan formerly adopted gave no indication of the original order in which the authors' names stood. To avoid this difficulty we have made a distinction as follows :

> **Cowell, P. H., and A. C. D. Crommelin.**
> **Crommelin, A. C. D., P. H. Cowell and.**

The original order is thus indicated.

In the case of triple authorship it is further necessary, in indexing the name of the second author, to introduce a dash. ——, to show the original position of his name, thus :

Christie, Sir W. H. M., A. S. Eddington, and C. Davidson.
Eddington, A. S., Sir W. H. M. Christie, ——, and C. Davidson.
Davidson, C., Sir W. H. M. Christie, A. S. Eddington, and.

It is hoped that this departure from precedent will be found justified by its convenience and accuracy. In other respects the rules of the preceding index have been followed.

General Index to Illustrations in "Memoirs" and "Monthly Notices."

In 1910 February, Mr. Knobel offered to undertake the preparation of a General Index to Illustrations in the *Memoirs* and *Monthly Notices* from their commencement, and his kind offer was gratefully accepted by the Council. The resulting Index forms the second part of this volume, and the principles upon which it is constructed are explained by Mr. Knobel in his separate Preface. The Society owes a debt of gratitude to Mr. Knobel for the care with which he has performed this voluntary task for its benefit. Mr. A. R. Wesley gave him efficient help in the preparation of this Index.

At the request of the Secretaries, Mr. A. C. D. Crommelin very kindly undertook to continue the List of Comets which was published as an Appendix to the previous Index. The value of the former list has been generally felt, and the Society is indebted to Mr. Crommelin for the trouble he has taken in extending the list to date.

A. R. HINKS
S. A. SAUNDER } *Secretaries.*

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AND THE

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1822—1910

PREFACE.

The Index to Illustrations comprises all drawings, photographs, etc., in the *Memoirs*, Vols. I. to LIX., and *Monthly Notices*, Vols. I. to LXX., with certain exceptions. Geometrical drawings, double star orbits, the light curves of variable stars and curves of plotted observations, have been as a rule omitted, but diagrams showing graphical processes for the solution of problems are included, as well as some diagrams of special interest. No hard and fast rule has been adopted, the main principle being to make the Index practically useful.

Each section is arranged, as a rule, in order of publication, classing illustrations in the *Memoirs* before those in the *Monthly Notices*, though in several cases illustrations by the same author are classed together. In the case of planets and comets, however, the illustrations are arranged in order of date.

With regard to the arrangement of subjects, it seems only necessary to mention that all illustrations of Instruments have been classified in the order adopted in the *International Catalogue of Scientific Literature*, which must be considered a standard for some time to come.

The position of plates is indicated by the page number in the *Monthly Notices*, but not in the *Memoirs*, as plates therein have not been placed uniformly; no difficulty, however, can be experienced in finding any plate referred to.

E. B. KNOBEL.

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APPENDIX

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1892–1910

APPENDIX

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Permanent Number.	Time of Perihelion Passage.	Provisional Designation.	First seen or Photographed.	Discoverer.	Name.	Period.
						Y.
1892 V.	Dec. 11·1	1892 *e*	Oct. 12	Barnard	Barnard	6·23
,, VI.	Dec. 28·1	1892 *d*	Aug. 28	Brooks		
1893 I.	Jan. 6·5	1892 *g*	Nov. 19	Brooks		
,, II.	July 7·3	1893 *b*	July 8	Rordame, Quénisset, Sperra		
,, III.	July 12·2	1893 *a*	May 17	Finlay	Finlay	6·62
,, IV.	Sept. 19·3	1893 *c*	Oct. 16	Brooks		
1894 I.	Feb. 9·5	1894 *a*	Mar. 26	Denning	Denning	7·42
,, II.	Apr. 13·5	1894 *b*	Apr. 1	Gale		1100
,, III.	Apr. 23·2	1894 *c*	May 8	Finlay	$Tempel_2$	5·22
,, IV.	Oct. 12·2	1894 *e*	Nov. 20	E. Swift	E. Swift	5·86
1895 I.	Feb. 4·7	1894 *d*	Oct. 31	Perrotin	Encke	3·31
,, II.	Aug. 20·9	1895 *a*	Aug. 20	Swift	Swift	7·06
,, III.	Oct. 21·1	1895 *d*	Nov. 21	Brooks		
,, IV.	Dec. 18·4	1895 *c*	Nov. 17	Perrine		
1896 I.	Jan. 31·7	1896 *a*	Feb. 14	Perrine, Lamp		
,, II.	Mar. 19·2	1895 *b*	Sept. 26	Javelle	Faye	7·58
,, III.	Apr. 17·7	1896 *b*	Apr. 15	Swift		
,, IV.	July 10·9	1896 *d*	Aug. 31	Sperra		
,, V.	Oct. 28·1	1896 *e*	Sept. 4	Giacobini	$Giacobini_1$	9·65
,, VI.	Nov. 4·2	1896 *c*	June 20	Javelle	$Brooks_2$	7·09
,, VII.	Nov. 24·6	1896 *g*	Dec. 8	Perrine	Perrine	6·44
1897 I.	Feb. 8·1	1896 *f*	Nov. 2	Perrine		
,, II.	June 2·8	1897 *a*	June 28	Perrine	d'Arrest	6·69
,, III.	Dec. 8·6	1897 *b*	Oct. 16	Perrine		
1898 I.	Mar. 17·1	1898 *b*	Mar. 20	Perrine		417
,, II.	Mar. 20·5	1898 *a*	Jan. 2	Perrine	Winnecke	5·8
,, III.	May 26·9	1898 *c*	June 7	Grigg	Encke	3·31
,, IV.	July 4·5	1898 *f*	June 16	Hussey	Wolf	6·83
,, V.	July 25·5	1898 *g*	June 18	Giacobini		
,, VI.	Aug. 16·2	1898 *e*	June 14	Perrine		
,, VII.	Sept. 14·0	1898 *d*	June 9	Coddington, Pauly		
,, VIII.	Sept. 20·1	1898 *k*	Nov. 14	Chase		

Permanent Number.	Time of Perihelion Passage.	Provisional Designation.	First seen or Photographed.	Discoverer.	Name.	Period.
						Y.
1898 IX.	Oct. 20·5	1898 *h*	Sept. 12	Perrine, Chofardet		
,, X.	Nov. 23·2	1898 *j*	Oct. 20	Brooks		
1899 I.	Apr. 13·0	1899 *a*	Mar. 3	Swift		
,, II.	Apr. 28·1	1899 *b*	Mar. 5	Wolf	Holmes	6·88
,, III.	May 4·5	1899 *c*	May 6	Perrine	Tuttle	13·65
,, IV.	July 28·5	1899 *d*	June 10	Perrine	$Tempel_2$	5·26
,, V.	Sept. 13·9	1899 *e*	Sept. 29	Giacobini		
1900 I.	Apr. 28·2	1900 *a*	Jan. 31	Giacobini		
,, II.	Aug. 3·2	1900 *b*	July 23	Borrelly, Brooks		
,, III.	Nov. 28·3	1900 *c*	Dec. 20	Giacobini	$Giacobini_2$	6·87
1901 I.	Apr. 24·3	1901 *a*	Apr. 12	Viscara	GreatSouth'nComet	
,, II.	Sept. 15·4	1901 *b*	Aug. 5	Wilson	Encke	3·31
1902 I.	May 7·2	1902 *a*	Apr. 15	Brooks		
,, II.	June 20·3	1902 *c*	July 22	Grigg		
,, III.	Nov. 23·0	1902 *b*	Aug. 31	Perrine, Borrelly		
1903 I.	Mar. 16·7	1903 *a*	Jan. 15	Giacobini		
,, II.	Mar. 25·3	1902 *d*	Dec. 2	Giacobini		
,, III.	Mar. 25·4	1903 *b*	Apr. 16	Grigg		
,, IV.	Aug. 27·6	1903 *c*	June 11	Borrelly		
,, V.	Dec. 6·4	1903 *d*	Aug. 18	Aitken	$Brooks_2$	7·10
1904 I.	Mar. 5·7	1904 *a*	Apr. 16	Brooks		
,, II.	Oct. 25·5	1904 *d*	Dec. 17	Giacobini		
,, III.	Nov. 10·4	1904 *c*	Nov. 30	Javelle	$Tempel_2$	5·28
1905 I.	Jan. 11·9	1904 *b*	Sept. 11	Kopff	Encke	3·30
,, II.	Jan. 16·7	1904 *e*	Dec. 28	Borrelly	Borrelly	7·04
,, III.	Apr. 4·1	1905 *a*	Mar. 26	Giacobini		2·97
,, IV.	Oct. 18·6	1906 *b*	Mar. 3	Kopff		
,, V.	Oct. 25·7	1905 *b*	Nov. 17	Schaer		
,, VI.	Dec. 22·2	1906 *a*	Jan. 26	Brooks		
1906 I.	Jan. 22·3	1905 *c*	Dec. 6	Giacobini		
,, II.	Feb. 20·7	1906 *c*	Mar. 17	Ross		
,, III.	Mar. 14·2	1906 *f*	Aug. 28	Wolf	Holmes	6·86
,, IV.	May 2·2	1906 *e*	Aug. 21	Kopff	Kopff	6·67
,, V.	Sept. 8·3	1906 *d*	July 16	Kopff		
,, VI.	Oct. 10·8	1906 *h*	Nov. 14	Metcalf	Metcalf	7·59
,, VII.	Nov. 21·3	1906 *g*	Nov. 11	Thiele		
1907 I.	Mar. 19·2	1907 *a*	Mar. 9	Giacobini		
,, II.	Mar. 27·5	1907 *b*	Apr. 9	Grigg, Mellish		
,, III.	May 27·2	1907 *c*	June 1	Giacobini		
,, IV.	Sept. 3·7	1907 *d*	June 9	Daniel		
,, V.	Sept. 13·7	1907 *e*	Oct. 13	Mellish		
,, VI.	Dec. 6·0	1908 *a*	Jan. 2	Wolf		
1908 I.	Apr. 30·9	1908 *b*	May 27	Woodgate	Encke	3·30
,, II.	Oct. 4·5	1908 *d*	Sept. 29	Javelle	$Tempel_3$, Swift	5·68
,, III.	Dec. 25·8	1908 *c*	Sept. 1	Morehouse		
1909 I.	June 5·3	1909 *a*	June 14	Borrelly		
,, II.	Oct. 9·3	1909 *d*	Oct. 31	Porro	Winnecke	5·89

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Permanent Number.	Time of Perihelion Passage.	Provisional Designation.	First seen or Photographed.	Discoverer.	Name.	Period.
						Y.
1909 III.	Oct. 31·9	1909 *b*	Aug. 12	Ebell	Perrine 1896 VII.	6·53
,, IV.	Nov. 28·7	1909 *e*	Dec. 6	Daniel	Daniel	6·48
1910 I.	Jan. 17·1	1910 *a*	Jan. 15	Several people	Daylight Comet	
,, II.	Apr. 19·7	1909 *c*	Aug. 24	Keeling, Knox-Shaw First detected by Wolf	Halley	76·0
,, ...	Sept. 16·3	1910 *b*	Aug. 10	Metcalf		
,, ...	Sept. 16·4	1910 *c*	Aug. 26	Gonnessiat	d'Arrest	6·55
,, V.	Nov. 1·7	1910 *e*	Nov. 8	Cerulli	Faye	7·41
1911 I.	Jan. 8·3	1910 *d*	Sept. 28	Aitken, Wilson	$Brooks_2$	7·10

NOTES

The present Appendix is similar to that in the preceding Index. The comets, however, are arranged in the order of their permanent numeration, instead of in that of discovery. The year of perihelion passage is given in the column headed "Permanent Number," while that of discovery is given in the column headed "Provisional Designation." The designation by letters is used for some months after the discovery of a comet, since there is always a possibility of a comet being found which passed perihelion some months before discovery, and it is better not to give permanent numbers till they can be made definitive; a further delay arises when two perihelia are nearly synchronous, as is the case in Sept. 1910; in a case like this we must wait for definitive elements before the order of precedence can be settled. The first nine comets of the table were contained in the previous Appendix, but are repeated here since they properly fall in the period of this Index.

It will be seen that Encke's comet keeps up its reputation for being observed at every return; also that Comets Brooks, Holmes, d'Arrest, Winnecke, Wolf, Tuttle, Faye, $Tempel_2$, and Tempel-Swift have all been re-observed, some of them several times. A number of new members have been added to the Jupiter family, of which one, Perrine's of 1896 VII., has been observed at a second appearance. The comet E. Swift is probably the same as De Vico's. The comets 1904 I., 1905 IV. are remarkable for large perihelion distances, 2·70, 3·34 respectively; a still larger value 3·84 was found for 1907 VI., but this is doubtful. The orbits of 1896 III., 1897 I., 1898 VII., 1899 I., 1900 II. appear to be hyperbolic.

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